Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

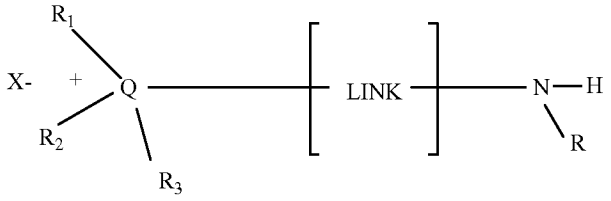
1-24. (Cancel)

25. (Previously Presented) A method of modifying the surface of a solid support to enhance the quantum yield of chemiluminescent emissions, the method comprising:

reacting a functional group on a quantum yield enhancing compound with functional groups on the solid support surface to covalently attach chemiluminescent enhancing moieties to the solid support surface; and

attaching a plurality of immobilized probes for a biopolymer target to the surface of the solid support prior to binding to the biopolymer target,

wherein the quantum yield enhancing compound comprises a quaternary onium polymer or a quaternary onium compound having the general formula:



wherein Q is N or P ; [LINK] is a divalent linker moiety; R_1, R_2 and R_3 are, independently, an alkyl group, an aryl group or a nitrogen heterocycle; R is hydrogen, an alkyl group, or an aryl group; and X^- is a counterion; and wherein the step of covalently bonding the enhancing moiety to the support surface comprises reacting an amino group

on the quaternary onium polymer or the amino group on the quaternary onium compound with functional groups on the support surface.

26. (Original) The method of Claim 25, wherein the functional groups on the solid support surface comprise azlactone groups.

27. (Cancel).

28. (Original) The method of Claim 25, wherein the solid support comprises a polyamide, the method further comprising:

forming the functional groups on the polyamide surface by reacting amine or carboxylate groups on the polyamide surface with an activating agent.

29. (Original) The method of Claim 28, wherein the activating agent is reacted with amine groups and the activating agent is selected from the group consisting of: carbonyl diimidazole; dihydroxysuccinimidyl carbonate; phosgene; and phenylchloroformate.

30. (Original) The method of Claim 28, wherein the activating agent is reacted with carboxylate groups and the activating agent is selected from the group consisting of: dihydroxysuccinimidyl carbonate; carbodiimides; oxalyl chloride; and carbonyl diimidazole.

31. (Original) The method of Claim 25, wherein the quantum yield enhancing compound comprises a latent functionality, the method further comprising reacting a functional group on a probe for a biopolymer target with the latent functionality on the

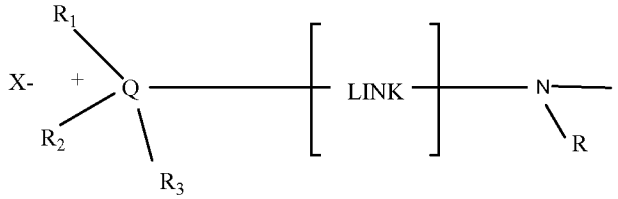
quantum yield enhancing compound to covalently attach the probe to the quantum yield enhancing compound.

32-68. (Cancel)

69. (Previously Presented) A solid support for chemiluminescent assays comprising:

a support having a surface;

a chemiluminescent quantum yield enhancing moiety covalently attached to the surface of the support, the chemiluminescent quantum yield enhancing moiety having the general formula:



wherein Q is N or P ; [LINK] is a divalent linker moiety; R_1, R_2 and R_3 are, independently, an alkyl group, an aryl group or a nitrogen heterocycle; R is hydrogen, an alkyl group, or an aryl group; and X^- is a counterion; and

a plurality of immobilized probes for a biopolymer target, wherein the probes are covalently, ionically or physically attached to the surface of the support.

70. (Previously Presented) The solid support of Claim 69, wherein the chemiluminescent quantum yield enhancing moiety is present in spatially defined regions on the surface of the planar support.

71. (Previously Presented) A kit for conducting chemiluminescent assays to determine the presence or absence of an analyte, comprising:

a) a dioxetane substrate bearing an enzyme-labile protecting group which, when cleaved, yields a chemiluminescent reporter molecule; and

b) an antibody-enzyme complex and/or a nucleic acid probe-enzyme complex, wherein the antibody or nucleic acid probe is specific for the analyte, and wherein the enzyme is capable of cleaving the enzyme-labile protecting group; and

c) the solid support of Claim 69.

72-74. (Cancel).